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Fine crosslinked cellulose particles used in cream base material, etc. - prepared by crosslinking cellulose fibre with crosslinking agent and pulverising finely

Patent Assignee: KAO CORP (KAOS)
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Patent Family:

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Patent Details:

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Abstract (Basic): JP 9302001 A

Fine crosslinked cellulose particles comprise cellulose fibre crosslinked with a crosslinking agent and finely pulverised. Also claimed is production of the fine crosslinked cellulose particles which comprises crosslinking cellulose fibre with a crosslinking agent and pulverising finely.

Cellulose fibre preferably comprises pulp. Crosslinking agent is polycarboxylic acid. The average particle size of the fine crosslinked cellulose particles is at most 300 mu m. A means of pulverising finely cellulose fibre is dry process or wet process. Polycarboxylic acid used as crosslinking agent is e.g. tartaric acid, maleic acid or polyacrylic acid. The amount. of crosslinking agent used is 0.1-200 (preferably 0.5-100) pts. wt. per 100 pts. wt. cellulose fibre. Catalyst for the crosslinking reaction, such as phosphoric acid, in an amount of 1-100 pts. wt. per 100 pts. wt. crosslinking agent can be used. The crosslinking reaction is carried out at 100-230 deg. C. Dry pulverising method is carried out by e.g. coffee mill and wet pulverising method is carried out by e.g. homomixer.

USE - The particles are useful for e.g. cream base material, fluidity-imparting agent, thixotropy-imparting agent, viscosity-increasing agent or dispersion stabiliser in cosmetics, drugs, paints and building material.

ADVANTAGE - The particles can be obtained in the form of slurry of high concentration, powder or paste. The fluidity characteristics, thixotropy, viscosity-increasing characteristics or dispersion characteristics of the particles can be controlled by controlling the degree of crosslinking of cellulose fibre. The cellulose particles have good dimensional stability because swelling of the particles is depressed when in a hydrated state and can be easily and economically made.

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Title Terms: FINE; CROSSLINK; CELLULOSE; PARTICLE; CREAM; BASE; MATERIAL; PREPARATION; CROSSLINK; CELLULOSE; FIBRE; CROSSLINK; AGENT; PULVERISE; FINE
Derwent Class: A11; B07; D21; G02
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001 018; R01852-R G3634 D01 D03 D11 D10 D23 D22 D31 D42 D50 D76 D86 F24 F29 F26 F34 H0293 P0599 G3623; S9999 S1456-R; M9999 M2073; L9999 L2391; L9999 L2073
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003 018; R00901 G0760 G0022 D01 D12 D10 D51 D53 D59 D60 D84 F37 F35 E00 E01; R00540 G2108 D01 D11 D10 D50 D60 D84 F28 F26 F37 F35; A999 A157-R
004 018; R01711 D00 D60 H- O- 6A P- 5A; A999 A146
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001 018; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53 D58 D60 D83 F36 F35; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53 D58 D60 D83 F36 F35; A999 A782; A999 A157-R; H0000; P0088 ; P0099
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Detailed Description Text (4):
The filtrate is free of microorganisms such as bacteria and fungi, possesses an unlimited shelf life, and may be produced either by recycling waste waxed paper, new waxed paper or by processing virgin vegetable constituents in the presence of wax during the emulsification phase of the defibering process.

Detailed Description Text (6):
In accordance with this invention, an example of the starting waxed paper that can be used is the type used in bakeries and deli-contestants to wrap food products. Waxed paper of this type is coated with a food grade paraffin wax, designated as a dry wax. Waste waxed paper can be used in the preferred embodiment and is obtained directly from the paper producing facilities. For example, trimmings from a trimming machine or wax paper that did not meet required test standards may be used. Such waxed paper is free of printing and thus is clean. The waxed paper is added to a pulper. A pulper is basically a vat for receiving a material that can be agitated by mechanical means and includes means to control the temperature. The process of pulping is essentially one of separating cells from intercellular material. It should be understood that any equipment such as a conventional high speed pulper may be used. The temperature of the wax-containing fiber slurry is raised to a temperature above the melting point of the wax and beating is continued until the wax and fiber are released into the aqueous solution. The resulting water-fiber slurry can then be subjected to a washing process to remove any impurities. Newly manufactured wax paper does not need this washing process.

Detailed Description Text (7):
The process of the present invention encompasses the use of 100% waxed paper stock having a wax content of up to 30% by weight. However, non-waxed waste paper, in modest proportions can be used without affecting the outcome. Non waxed fiber products can be used as a starting product and a paraffin wax in the correct ratio to fiber added. The use of waxed paper as a starting point has the advantage that it contains the proper ratio of fiber to wax and it is available at economical rates.

Detailed Description Text (12):
Wax from the original waste waxed paper is present on minute portions of fiber that are dispersed in the preservative. The preservative coasts the fibers contained in the wet lap pulp and prevents the wet lap pulp from decaying. The food grade preservative Potassium sorbate functions as a non-toxic ingredient that is carried by the slightly acid water base that alone has an unlimited shelf life. This unique combination of ingredients results in a preservative that can be easily sprayed on an organic product that is to be stored or preserved for use in the non-paper industry. Although wax is present on the minute fibers filaments, in a very thin coating, this wax does not hinder the use of the wet lap pulp in any manner.